

	Type	L #	Hits	Search Text	DBs	Time Stamp	Error Comments	Errors
1	BRS	L1	37338 9	electrolyte or separator	USPAT ; EPO; JPO; DERWE NT	2001/11/19 10:20		0
2	BRS	L2	894	1 and (trifluorochloroethylene chlorotrifluoroethylene TFCE CTFE)	USPAT ; EPO; JPO; DERWE NT	2001/11/19 10:21		0
3	BRS	L3	314	2 and ((HFP hexafluoropropylene) same (trifluorochloroethylene chlorotrifluoroethylene TFCE CTFE))	USPAT ; EPO; JPO; DERWE NT	2001/11/19 10:22		0
4	BRS	L4	267	3 and (pvdf pvf kynar (vinylidene adj fluoride\$1) (vinylidine adj fluoride\$1) vinylidenefluoride\$1 vinylidinefluoride\$1)	USPAT ; EPO; JPO; DERWE NT	2001/11/19 10:29		0
5	BRS	L5	32	4 and ((electrolyte\$1 separator\$1) same (pvdf pvf kynar (vinylidene adj fluoride\$1) (vinylidine adj fluoride\$1) vinylidenefluoride\$1	USPAT ; EPO; JPO; DERWE NT	2001/11/19 10:30		0

09/582,432

(FILE 'HOME' ENTERED AT 20:46:12 ON 18 NOV 2001)

FILE 'CAPLUS' ENTERED AT 20:46:23 ON 18 NOV 2001

L1 29 S (HEXAFLUOROPROPYLENE (S) (VINYLIDENE FLUORIDE) (S)
 TRIFLUORO
 L2 0 S L1 AND (ELECTROLYTE SEPARATOR)
 L3 1 S L1 AND (BATTERY OR (ELECTROCHEMICAL CELL))
 L4 0 S (HEXAFLUOROPROPYLENE (S) (VINYLIDENE FLUORIDE) (S)
 TRIFLUOROC
 L5 1 S (HEXAFLUOROPROPYLENE (S) (VINYLIDENEFLUORIDE) (S)
 TRIFLUOROC
 L6 72 S (HEXAFLUOROPROPYLENE (S) (VINYLIDENE FLUORIDE) (S)
 CHLOROTRIF
 L7 1 S (HEXAFLUOROPROPYLENE (S) (VINYLIDENE FLUORIDE) (S) (CTFE OR
 T
 L8 73 S L6 OR L7
 L9 70 S L8 AND ?POLYMER
 L10 6 S L9 AND (ELECTROLYTE OR SEPARATOR)

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L10 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:738344 CAPLUS

DOCUMENT NUMBER: 135:291353

TITLE: Gel **polymer** compositions and their
manufacture for battery **electrolytes**

INVENTOR(S): Kanega, Atsushi; Enokida, Takashi

PATENT ASSIGNEE(S): Nippon Mectron Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001279044	A2	20011010	JP 2000-281101	20000918

PRIORITY APPLN. INFO.: JP 2000-14318 A 20000124

TI Gel **polymer** compositions and their manufacture for battery
electrolytes

AB The gel **polymer** compns. contain a Li salt solvent in a
copolymer contg. **vinylidene fluoride** 92-97,
hexafluoropropylene 1-4, and **chlorotrifluoroethylene** 1-7
mol%, m. 30-160.degree., having no. av. mol. wt. 150,000-300,000, and
logarithmic viscosity 1.0-1.4 dL/g. The polymers are prepd. by 1st
charging the whole amt. of **chlorotrifluoroethylene** in a reaction
vessel, charging **hexafluoropropylene** in 1 or several batches,
and charging **vinylidene fluoride** in several batches.

IT Battery **electrolytes**
(gel **polymer** compns. contg. lithium salt solvents and their
manuf. for battery **electrolytes**)

IT 96-49-1P, Ethylene carbonate 108-32-7P, Propylene carbonate
25101-47-7P, **Chlorotrifluoroethylene-hexafluoropropylene**
-vinylidene fluoride copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(gel **polymer** compns. contg. lithium salt solvents and their

L10 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:677132 CAPLUS

DOCUMENT NUMBER: 135:213528

TITLE: Secondary lithium ion batteries, **separators**, battery packs, and charging method

INVENTOR(S): Daido, Takahiro; Igarashi, Satoshi; Nishikawa, Satoshi; Honmoto, Hiroyuki; Minematsu, Hiroyoshi

PATENT ASSIGNEE(S): Teijin Limited, Japan

SOURCE: PCT Int. Appl., 52 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001067536	A1	20010913	WO 2001-JP1785	20010307

W: AU, CA, CN, JP, KR, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRIORITY APPLN. INFO.: JP 2000-61674 A 20000307
JP 2000-127309 A 20000427
JP 2000-323795 A 20001024

TI Secondary lithium ion batteries, **separators**, battery packs, and charging method

AB The batteries have porous sheet **separators**, cathodes with reversible Li intercalation capacity Q_p , anodes with reversible Li intercalation capacity Q_n .ltoreq. Q_p , and the cathode is doped with Li deposited on the anode, when charged at a charging current $I_c = (0.2-2)Q_n$ to a total charging amt. Q_c of $1 < (Q_c/Q_n) < (Q_p/Q_n)$, and continued to charge until Q_c becomes $>Q_p$. The **separators** have av. thickness 10-35 .mu.m, base wt. 6-20 g/m², gas permeability <100 s (JIS P8117).

The **separators** are preferably sheets of fibers having av. thickness 0.1-0.5 times the sheet thickness, and the **separators** may also contain an **electrolyte** retaining-swelling porous **polymer** membrane inside the sheet. The battery packs contain the batteries and a heat sensor or heat sensitive switch. The batteries are charged at const. current while using the temp. rise, voltage drop, and/or voltage oscillation of the battery as indication of the end of charge.

IT Polyamide fibers, uses
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(aramid; specifications of **polymer** fiber based sheets for **separators** in secondary lithium batteries)

IT Secondary batteries
(lithium; anode limiting secondary lithium batteries with **polymer** fiber based **separators** and battery charging method)

IT Temperature sensors
(secondary lithium battery packs contg. heat sensors or heat switches)

IT Secondary battery **separators**
(specifications of **polymer** fiber based sheets for **separators** in secondary lithium batteries)

IT Polyester fibers, uses
Polyesters, uses
Polypropene fibers, uses
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(specifications of **polymer** fiber based sheets for **separators** in secondary lithium batteries)

IT Control apparatus
(thermal switches; secondary lithium battery packs contg. heat sensors or heat switches)

IT 25038-59-9, Poly(ethylene terephthalate), uses 2001-47-7,
Chlorotrifluoroethylene-hexafluoropropylene-
vinylidene fluoride copolymer

RL: DEV (Device component use); PRP (Properties); USES (Uses)
(specifications of **polymer** fiber based sheets for
separators in secondary lithium batteries)

REFERENCE COUNT: 8

REFERENCE(S): (1) Fuji Photo Film Co Ltd; JP 113731 A 1999
(2) Nec Corporation; JP 963652 A 1997
(3) Nec Corporation; US 5708351 A 1998
(5) Sanyo Electric Co Ltd; JP 07153494 A 1995 CAPLUS
(7) Tdk Corporation; EP 1009056 A1 2000 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:628185 CAPLUS

DOCUMENT NUMBER: 133:223513

TITLE: Fluorinated copolymers from preemulsified comonomers
and method for free radical polymerization thereof

INVENTOR(S): Bekiarian, Paul Gregory; Farnham, William Brown

PATENT ASSIGNEE(S): E.I. Du Pont de Nemours and Co., USA

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000052060	A1	20000908	WO 2000-US5526	20000302
W: AU, CA, CN, FI, JP, KR, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1999-122354 P 19990302

TI Fluorinated copolymers from preemulsified comonomers and method for free
radical polymerization thereof

AB The method comprises copolymerizing in aq. emulsion one or more monomers
selected from tetrafluoroethylene (TFE), trifluoroethylene,
vinylidene fluoride, vinyl fluoride, ethylene,
chlorotrifluoroethylene, **hexafluoropropylene**,
perfluoromethyl vinyl ether, and perfluoroethyl vinyl ether with a
fluorinated comonomer having limited water solubility, in the presence of a
fluorinated surfactant and free-radical initiator. The comonomer is
dispersed in the form of droplets of 0.1 to 10 μ m size and preferably
is perfluorosulfonate ethoxypropyl vinyl ether (PSEPVE). The
copolymer preferably is hydrolyzed using a basic solution to provide
the alkali metal cationic form of the ionomer, and can be melt processed
into a film or sheet. The copolymers having certain ionic conductivity, water
swelling and effective ionic concentration, are useful in electrochem.
applications such as lithium batteries, **polymer**
electrolyte membrane fuel cells, electrolysis cells, ion-exchange
membranes, sensors, electrochem. capacitors, and modified electrodes, and
strong acid catalysts (no data). Thus, 150 g PSEPVE aq. emulsion, 13.2 g
ammonium perfluorooctanoate, and 0.9 g potassium persulfate solution in 20

mL

water was polymerized under 200 psi TFE at 60 degree for 1.23 h to obtain a
clear, water-white latex containing 16% **polymer** solids, which was
frozen, defrosted, washed and dried to yield 320 g fine **polymer**
powder. The above **polymer** was melt pressed at 320 degree and 5
klb pressure to obtain a clear film (2.5-3.5 mil) which was hydrolyzed in
a 0.5 M solution of LiOH in 1:2 DMSO:H₂O at 70 degree for 4 h, washed,
acid-exchanged in 1.0 M nitric, and washed to obtain a membrane having
water uptake 15 wt.% and ionic conductivity at 23 degree 65 mS/cm.

IT Sensors

(electrochem.; fluoropolymers from preemulsified comonomers and

free-radical polymn. thereof)

IT Polymerization
(emulsion, radical; fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT Chemically modified electrodes
Electrolytic capacitors
Electrolytic cells
Fuel cells
Ion exchange membranes
(fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT Fluoropolymers, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT Secondary batteries
(lithium; fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT Ionic conductors
(polymeric; fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT 62879-78-1DP, hydrolyzed 62879-78-1P 291750-38-4P 291750-39-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT 7727-21-1, Potassium persulfate 7727-54-0, Ammonium persulfate
RL: CAT (Catalyst use); USES (Uses)
(initiator; fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

IT 3825-26-1
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(surfactant; fluoropolymers from preemulsified comonomers and free-radical polymn. thereof)

REFERENCE COUNT: 3

REFERENCE(S): (1) Asahi Glass Co Ltd; JP 62288617 A 1987 CAPLUS
(2) Ici Plc; WO 9403503 A 1994 CAPLUS
(3) Nakayama, Y; US 5608022 A 1997 CAPLUS

L10 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:464139 CAPLUS

DOCUMENT NUMBER: 131:90262

TITLE: **Polymer electrolytes and nonaqueous batteries using the electrolytes**

INVENTOR(S): Katsurao, Takumi; Horie, Katsuo; Ichikawa, Yukio; Nagai, Aisaku

PATENT ASSIGNEE(S): Kureha Kagaku Kogyo Kabushiki Kaisha, Japan

SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9934372	A1	19990708	WO 1998-JP5848	19981224
W: CA, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1043732	A1	20001011	EP 1998-961510	19981224
R: DE, FR, GB				
PRIORITY APPLN. INFO.:			JP 1997-366969	A 19971226
			WO 1998-JP5848	W 19981224

TI **Polymer electrolytes** and nonaqueous batteries using the **electrolytes**

AB The **electrolytes** contain a nonaq. **electrolyte** soln. and a vinylidene fluoride **copolymer**, which contains 80-97% vinylidene fluoride and having intrinsic viscosity 1.5-10 dL/g. The batteries are secondary Li batteries.

IT **Battery electrolytes**
(vinylidene fluoride copolymers for **polymer electrolytes** for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 9010-75-7, Chlorotrifluoroethylene-vinylidene fluoride **copolymer** 9011-17-0, Hexafluoropropylene-vinylidene fluoride **copolymer** 21324-40-3, Lithium hexafluorophosphate 25101-47-7, Chlorotrifluoroethylene-hexafluoropropylene-vinylidene fluoride **copolymer**

RL: DEV (Device component use); USES (Uses)
(vinylidene fluoride copolymers for **polymer electrolytes** for secondary lithium batteries)

REFERENCE COUNT: 4

REFERENCE(S): (1) Asahi Chemical Industry Co Ltd; JP 09306462 A 1997

CAPLUS

(2) Kureha Chemical Industry Co Ltd; JP 09289023 A 1997 CAPLUS

(3) Matsushita Electric Industrial Co Ltd; JP 06318454

A 1994 CAPLUS

(4) Sony Corp; JP 07296815 A 1995 CAPLUS

L10 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:231853 CAPLUS

DOCUMENT NUMBER: 130:299396

TITLE: Crosslinked **fluoropolymer electrolyte** having high ionic conductivity and good electrochemical and thermal stability, and lithium battery using same **electrolyte**

INVENTOR(S): Kamiya, Hiroki; Kaida, Yuriko; Tamura, Masayuki; Suhara, Manabu; Ikeda, Katsuji; Hiratsuka, Kazuya

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp. CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11096832	A2	19990409	JP 1997-255600	19970919

TI Crosslinked **fluoropolymer electrolyte** having high ionic conductivity and good electrochemical and thermal stability, and lithium battery using same **electrolyte**

AB The **fluoropolymer electrolyte** comprises a nonaq. solvent dissolving an **electrolyte** solute, and as a matrix, a crosslinked **copolymer** having a fluoroolefin unit and a polymerizable unit having a crosslinkable group. Preferably, the fluoroolefin is selected from **chlorotrifluoroethylene**, tetrafluoroethylene, **vinylidene fluoride**, and **hexafluoropropylene**. A Li battery using the claimed **polymer electrolyte** is also claimed. Thus, a crosslinked t-Bu allylperoxy carbonate-chlorotrifluoroethylene-vinylene carbonate **copolymer** film was impregnated with a solvent contg. 1:1 mixt. of ethylene carbonate and propylene carbonate and dissolving 1M LiPF₆. The film had elec. cond. 4 .times. 10⁻⁴ S/cm.

IT Fluoropolymers, uses

RL: DEV (Device component use); IMF (Industrial manufacture); TEM

(Technical or engineered material use); PREP (Preparation); USES (Uses)
 (crosslinked, battery **electrolyte**; **polymer electrolyte** contg. solute-dissolving nonaq. solvent and crosslinked **fluoropolymer** matrix for lithium battery **electrolytes**)

IT Battery **electrolytes**
Polymer electrolytes
 (polymer **electrolyte** contg. solute-dissolving nonaq. solvent and crosslinked **fluoropolymer** matrix for lithium battery **electrolytes**)

IT 7439-93-2DP, Lithium, complex with crosslinked **fluoropolymer**
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (battery **electrolyte**; **polymer electrolyte** contg. solute-dissolving nonaq. solvent and crosslinked **fluoropolymer** matrix for lithium battery **electrolytes**)

IT 223141-78-4P 223141-79-5P 223141-80-8P 223141-81-9P 223141-82-0P
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymer **electrolyte** contg. solute-dissolving nonaq. solvent and crosslinked **fluoropolymer** matrix for lithium battery **electrolytes**)

L10 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1984:480721 CAPLUS
 DOCUMENT NUMBER: 101:80721
 TITLE: Solid **electrolyte** battery
 PATENT ASSIGNEE(S): Toshiba Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59044770	A2	19840313	JP 1982-155193	19820908

TI Solid **electrolyte** battery

AB In fabricating a Li ion-conductive solid **electrolyte** battery, the battery elements are surrounded by an insulating ring-shaped packing material made of PTFE, poly(chlorotrifluoroethylene), poly(vinyl fluoride), poly(trifluoroethylene), poly(vinylidene fluoride), or poly(hexafluoropropylene). Good mech. strength and resistance to vol. change upon battery discharge is achieved.

IT Packing materials
 (fluoropolymer, for lithium solid-electrolyte battery)

IT Batteries, primary
 (lithium solid-electrolyte, fluoropolymer packing material for)

IT Fluoropolymers
 RL: PRP (Properties)
 (packing materials, for lithium solid-electrolyte primary batteries)

IT 7439-93-2, uses and miscellaneous
 RL: USES (Uses)
 (anodes, in solid-electrolyte battery, with fluoropolymer packing materials)

IT 9002-83-9 9002-84-0 24937-79-9 24980-67-4 24981-14-4 25120-07-4
 RL: PRP (Properties)
 (packing materials, for lithium solid-electrolyte primary batteries)

(FILE 'HOME' ENTERED AT 20:46:12 ON 18 NOV 2001)

FILE 'CAPLUS' ENTERED AT 20:46:23 ON 18 NOV 2001

L1 29 S (HEXAFLUOROPROPYLENE (S) (VINYLIDENE FLUORIDE) (S)
TRIFLUORO

L2 0 S L1 AND (ELECTROLYTE SEPARATOR)

L3 1 S L1 AND (BATTERY OR (ELECTROCHEMICAL CELL))

=> d 1 ibib ti abs it

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:28027 CAPLUS

DOCUMENT NUMBER: 130:69134

TITLE: **Battery separator and its production, and secondary nonaqueous battery**

INVENTOR(S): Miyaki, Yoshiyuku; Ohashi, Kazuyoshi

PATENT ASSIGNEE(S): Elf Atochem S.A., Fr.

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9859384	A1	19981230	WO 1998-EP4001	19980617
W: CA, CN, JP, KR, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 11016561	A2	19990122	JP 1997-165648	19970623
PRIORITY APPLN. INFO.:			JP 1997-165648	A 19970623
TI	Battery separator and its production, and secondary nonaqueous battery			
AB	The separator comprises a PVDF resin porous body contg. dispersed inorg. filler. The PVDF resin is a copolymer of vinylidene fluoride and .gtoreq.1 monomer selected from tetrafluoroethylene, hexafluoropropylene , trifluoroethylene, and trifluorochloroethylene ; the proportion of the vinylidene fluoride component in the copolymer being .gtoreq.50 wt.%. The inorg. filler is selected from inorg. oxides (SiO ₂ , Al ₂ O ₃) and silicates. The separator is prepd. by dissolving PVDF resin in a solvent to form a soln. in which is dispersed an inorg. filler, and this soln. is brought into contact with a PVDF resin nonsolvent.			
IT	Fluoropolymers, uses RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (battery separators from inorg. filler-contg. porous)			
IT	Silicates, uses RL: TEM (Technical or engineered material use); USES (Uses) (battery separators from porous PVDF resin contg. dispersed)			
IT	Secondary battery separators (porous PVDF resin contg. dispersed inorg. filler)			
IT	24937-79-9, Kynar 741 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (battery separators from inorg. filler-contg. porous)			
IT	9010-75-7, Trifluorochloroethylene-vinylidene fluoride copolymer			

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9011-17-0, Hexafluoro propylene-vinylidene fluoride copolymer
25684-76-8, Tetrafluoroethylene-vinylidene fluoride copolymer
28960-88-5, Trifluoroethylene-vinylidene fluoride copolymer
RL: TEM (Technical or engineered material use); USES (Uses)

(battery separators from inorg. filler-contg. porous)

IT 7631-86-9, Silica, uses

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(battery separators from porous PVDF resin contg. dispersed)

IT 1344-28-1, Alumina, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(battery separators from porous PVDF resin contg. dispersed)

REFERENCE COUNT:

7

REFERENCE(S) :

- (1) Antoni, G; US 5429891 A 1995 CAPLUS
- (2) Antoni, G; US 5607485 A 1997 CAPLUS
- (3) Atochem North America Elf; EP 0730316 A 1996 CAPLUS
- (4) Japan Gore Tex Inc; EP 0577387 A 1994 CAPLUS
- (6) Paul, W; US 5571634 A 1996 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT